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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/705,316

11/10/2003

Ramnath N. Iyer

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EXAMINER

LANG, AMY T

ART UNIT

PAPER NUMBER

3731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/705,316

Applicant(s)

IYER ET AL.

Examiner

Amy T. Lang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-20 and 22-34 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-20 and 22-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 10/25/2006. In particular, claims 1-5, 7-21, and 22-34. This combination of limitations was not present in the original claims. Thus, the following action is properly made final.

Response to Arguments

Claim 1 rejection under 35 U.S.C. 112 first paragraph in office action mailed 06/06/2006 has been withdrawn in light of applicant's arguments.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. **Claims 1, 9-12, 14-16, 24-27, and 29-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan (US 2002/0151441 A1).

With regards to **claims 1, 9-12, 16, 24-27, and 31**, US '441 discloses an automatic fluid composition comprised of major amount of base oil and phosphorus or boron containing dispersants ([0046]; claim 1, page 10). However, attention is drawn to where US '441 discloses that in a preferred embodiment the phosphorus containing dispersants are also boronated ([0058]). It therefore would have been obvious to incorporate both the boron containing dispersants and phosphorus and boron containing dispersants in equal amounts in the automatic fluid composition and arrive at the instant claims. US '441 further discloses the amount of dispersant as 3.77 wt% in the lubricating composition (Table 1, page 9).

In addition to dispersants, US '441 discloses overbased detergents in the composition, specifically calcium sulfonate and calcium phenate with a TBN of 300 and 260 mgKOH/gram respectively ([0041], [0042]). Although US '441 does not disclose the wt% calcium in the detergent, it is the examiner's position that TBN is related to wt% calcium in the compound. US '441 teaches that overbased detergents incorporate a large amount of calcium and superbased detergents have an exceptionally high TBN ([0041], [0043]). Therefore, superbased detergents comprise elevated amounts of wt% calcium so that wt% of calcium and TBN are related. Thus, if calcium sulfonate and calcium phenate overlap the instantly claimed ranges of TBN, they would also overlap the instantly claimed ranges of wt% of calcium.

With regards to **claims 14, 15, 29, 30, and 32-34**, US '411 discloses the fluid composition as a continuously variable transmission fluid that improves anti-shudder characteristics ([0023], [0025], [0026]). Furthermore, it is also taught as lubricating automatic transmissions with electronically controlled converter clutches whereby the composition would intrinsically increase steel-on-steel friction and stabilize steel-on-steel paper friction ([0003]).

4. **Claims 1-5, 7-8, 13-20, 22-23, and 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrisope (US 5,089,156) in view of Srinivasan (US 2002/0151441 A1).

With regard to **claims 1-5, 7, 8, 16-20, 22, 23, and 31**, US '156 discloses a transmission fluid comprised of born containing dispersants and phosphorus and boron containing dispersants (column 1, lines 58-62). The dispersants further comprise succinimides, specifically polyisobutylene succinimides, where the polyisobutylene has a molecular weight up to 10,000 or a number average molecular weight of 900-1300 (column 7, lines 11-19; column 7, line 62 through column 8, line 2). The weight percent of the dispersants is disclosed as 2-5 wt% in the lubricating fluid, which clearly overlaps the instant range (column 12, lines 40-46). The fluid composition is also comprised of a major amount of base oil, specifically 50 percent by volume or more (column 3, lines 19-28). Although US '156 does not specifically disclose the amount of phosphorus and boron containing additive in the total additive composition, US '156 does disclose a mixture of phosphorus and boron containing dispersants with a boron containing

dispersant. Therefore, it would have been obvious to one of ordinary skill at the time of the invention for the mixture to contain 50% of each dispersant in the additive composition.

US '156 also discloses a metal-containing detergent in the transmission fluid, including calcium sulfonate (column 12, lines 5-10). However, US '156 does not disclose this detergent as overbased. US '441 discloses an automatic fluid composition comprised of major amount of base oil and phosphorus or boron containing dispersants ([0046]; claim 1, page 10). The composition further includes overbased detergents, specifically calcium sulfonate ([0041], [0042]). Therefore, since US '441 discloses the use of an overbased calcium sulfonate detergent in a transmission fluid, it would have been obvious to one of ordinary skill at the time of the invention for the calcium sulfonate detergent of US '156 to also be overbased.

With regard to **claims 13 and 28**, further additives are disclosed, specifically corrosion inhibitors, foam inhibitors, pour point depressants, viscosity index improvers, antioxidants and seal performance improvers, which clearly overlap the instant claims (column 10, line 67 through column 11, line 3; column 11, lines 13-14, 40-43; column 12, lines 15-17, 50-62).

With regard to **claims 14, 15, 29, 30**, the fluid disclosed by US '156 is specifically utilized for manual and automatic transmissions fluid and gear oils, which comprises the instantly claimed shifting clutches (column 13, lines 17-25). Furthermore, the disclosed composition is inherently suitable for use in a disk-type continuously variable transmission since US '156 teaches the same composition as is instantly claimed.

5. **Claims 1, 12, 14-16, 27, and 29-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan (US 5,578,236) in view of Srinivasan (US 2002/0151441 A1):

With regard to **claims 1, 12, 16, 27, and 31**, US '236 discloses a power transmission fluid comprised of phosphorus and boron containing dispersants, boron containing dispersants, and a major amount of base oil (column 1, lines 53-55; column 2, lines 17-19, 61-67). The dispersants are used in amounts of 3.77 wt% in the fluid composition, which clearly overlaps the instant range of 2.0% or more (column 14, Table 1, line 56). US '236 does not specifically disclose the amount of phosphorus and boron containing additive in the total additive composition. However US '156 does disclose a mixture of phosphorus and boron containing dispersants with a boron containing dispersant. Therefore, it would have been obvious to one of ordinary skill at the time of the invention for the mixture to contain 50% of each dispersant in the additive composition.

A detergent is also disclosed, specifically calcium sulfurized phenates with a TBN of 200 mgKOH/gram (column 12, lines 27-36). However, US '236 does not disclose this detergent as overbased. US '441 discloses an automatic fluid composition comprised of major amount of base oil and phosphorus or boron containing dispersants ([0046]; claim 1, page 10). The composition further includes overbased detergents, specifically calcium phenate ([0041]). Therefore, since US '441 discloses the use of an overbased calcium phenate detergent in a transmission fluid, it would have been obvious to one of

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ordinary skill at the time of the invention for the calcium phenate detergent of US '236 to also be overbased.

With regards to **claims 14, 15, 29, 30, and 32-34**, the disclosed power transmission is specifically utilized for automatic transmission fluids, especially for new models of automatic transmission fluids which incorporate torque converter clutches that operate in a slip mode (column 2, lines 52-60). Therefore, the composition is suitable for use in a slipping torque converter and shifting clutches. Furthermore, a torque converter that operates in slip mode is equivalent to a continuously variable transmission fluid, including a disk-type CVT. Therefore, by utilizing the fluid composition disclosed by US '236 in a torque converter, it intrinsically improves steel-on-steel friction and anti-shudder characteristics and stabilizes steel-on-paper friction.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Lang whose telephone number is (571) 272-9057. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/29/2006
Amy T. Lang

ATL


ANH TUAN T. NGUYEN
SUPERVISORY PATENT EXAMINER

1/4/07